

REMARKS

Claims 37-78 are pending in the present application and at issue. Claims 75 and 76 have been amended to address the objection under 37 C.F.R. 1.75(c).

It is respectfully submitted that the present amendment presents no new issues or new matter and places this case in condition for allowance. Reconsideration of the application in view of the above amendments and the following remarks is requested.

I. The Restriction Requirement

The Office maintained the restriction requirement for the following reasons:

Applicant's election with traverse of Group III ... is acknowledged. The traversal is on the ground(s) that Groups I-VII are classified in class 435, subclass 209 and that some mutations are overlapping and that examination of Groups I-XII is not a burden on the examiner. This is not found persuasive because class 435, subclass 209 comprises thousands of patents given to distinct inventions. In the instant case, inventions I-XII are patentably distinct as directed to different variants of different enzymes. Taken into account the number of mutations, thorough examination of the groups together would represent a serious burden on the Examiner.

This rejection is respectfully traversed.

Applicants submit that the number of patents in class 435, subclass 209 is irrelevant because all of the patents must be searched regardless of the number of mutations recited in the claims. Applicants therefore submit that restriction is improper and request withdrawal thereof.

II. The Objection to Claims 74-76 under 37 C.F.R. 1.75(c)

The Office objected to claims 74-76 under 37 C.F.R. 1.75(c) for failing to further limit the subject matter of a previous claim. Claims 75 and 76 have been amended to address the objection to these claims.

With respect to claim 74, the Office stated that "Claim 74 recites SEQ ID NO:1 to which independent claim 37 is limited." This objection is respectfully traversed.

Claim 37 recites that the positions are numbered according to the sequence of SEQ ID NO: 1; claim 37 is not limited to variants of the cellulase of SEQ ID NO: 1. Applicants therefore submit that this objection has been overcome.

III. The Rejection of Claims 37, 42, 43 and 74-78 under 35 U.S.C. 112

Claims 37, 42, 43 and 74-78 are rejected under the written description and enablement requirements of 35 U.S.C. 112. These rejections are respectfully traversed.

It is well settled that "a specification disclosure which contains a teaching of the manner and process of making and using the invention in terms which correspond in scope to those used in describing and defining the subject matter sought to be patented must be taken as in compliance with the enabling requirement of the first paragraph of section 112 unless there is reason to doubt the objective truth of the statements contained therein which must be relied on for enabling support." *In re Marzocchi*, 169 U.S.P.Q. 367, 369 (C.C.P.A. 1971).

Moreover, "[a]ny assertion by the Patent Office that the enabling disclosure is not commensurate in scope with the protection sought must be supported by evidence or reasoning substantiating the doubts so expressed." *In re Dinh-Nguyen*, 181 U.S.P.Q. 46, 47 (C.C.P.A. 1974). Thus, the burden is upon the Patent Office to set forth reasonable grounds in support of its contention that a claim reads on inoperable subject matter). See *In re Stark*, 172 U.S.P.Q. 402, 406 n. 4 (C.C.P.A. 1972).

The specification describes cellulases modified at specified positions. In addition, the specification provides that the variants can be modified at other positions and includes examples of such other positions. Based on Applicants' disclosure, the skilled artisan would be led to make other mutations to obtain the benefits described in the present application. Should Applicants not be entitled to reap the benefits of this obvious extension of their inventive efforts?

Moreover, Applicants submit that the specification demonstrates that Applicants had possession of the claimed invention at the time the application was filed.

For the foregoing reasons, Applicants submit that the claims overcome this rejection under 35 U.S.C. 112. Applicants respectfully request reconsideration and withdrawal of the rejection.

IV. The Rejection of Claims 37, 42, 43 and 74-78 under 35 U.S.C. 112

Claims 37, 42, 43 and 74-78 are rejected under 35 U.S.C. 112 as being indefinite. This rejection is respectfully traversed.

First, the Office objected to claims 37, 76 and 77 because they recite positions in SEQ ID NO: 1 defined by a figure and a letter such as 42a, for example. However, SEQ ID NO: 1 does not have positions defined in this way.

The letters included in the positions, e.g., as in 42a, are defined at pages 7-11 of the specification. Applicants therefore submit that this ground for the rejection has been overcome.


Second, the Office objected to claims 75-777 recite positions in SEQ ID NO: 1 defined by an asterisk. Asterisks are defined at page 5, line 37 of the specification. Applicants therefore submit that this ground for the rejection has also been overcome.

V. Conclusion

In view of the above, it is respectfully submitted that all claims are in condition for allowance. Early action to that end is respectfully requested. The Examiner is hereby invited to contact the undersigned by telephone if there are any questions concerning this amendment or application.

Respectfully submitted,

Date: November 21, 2001


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Attorney Docket No.: 4887.204-US

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: Andersen et al.

Confirmation No: 7632

Serial No.: 09/261,329

Group Art Unit: 1652

Filed: March 3, 1999

Examiner: E.Slobodyansky

For: Cellulase Variants

VERSION WITH MARKINGS TO SHOW CHANGES MADE

Sir:

Below is a marked-up version of the amendments made in the accompanying amendment.

IN THE CLAIMS:

Claims 75 and 76 have been amended as follows:

75. The cellulase variant of claim 74, wherein the mutation comprises ~~G16M+Q56G, D42W, D42W, D42Y, E48D/P49*, E46N/P49* and/or L70Y and/or Q26G.~~

76. A cellulase variant of claim 37, wherein the mutation comprises:

~~K43L or L43K;~~~~P44A or A44P;~~~~G151I or I151G;~~~~K20E, K20G, K20A, E20K, G20K, A20K, E20G, E20A, G20E, A20E, G20A, or A20G;~~~~K21N or N21K;~~

A22G, A22P, G22A, P22A, G22P, or P22G;

V24*, V24L, *24V, L24V, *24L, or L24*;

N32D, N32S, N32K, D32N, S32N, K32N, D32S, D32K, S32D, K32D, S32K, or K32S;

N34D or D34N;

G50N or N50G;

A53S, A53G, A53K, S53A, G53A, K53A, S53G, S53K, G53S, K53S, G53K, or K53G;

Y54F or F54Y;

V64I, V64D, I64V, D64V, I64D, or D64I;

F68V, F68L, F68T, F68P, V68F, L68F, T68F, P68F, V68L, V68T, V68P, L68V, T68V,
P68V, L68T, L68P, T68L, P68L, T68P, or P68T;

A69S, A69T, S69A, T69A, S69T, or T69S;

L70Y or Y70L;

G71A or A71G;

G79T or T79G;

W85T or T85W;

A88Q, A88G, A88R, Q88A, G88A, R88A, Q88G, Q88R, G88Q, R88Q, G88R, or R88G;

L92A or A92L;

T93Q, T93E, Q93T, E93T, Q93E, or E93Q;

V106F or F106V;

Q138E or E138Q;

G140N or N140G;

S152D or D152S;

R153K, R153L, R153A, K153R, L153R, A153R, K153L, K153A, L153K, A153K, L153A, or
A153L;

G166S or S166G;

W169F or F169W;

R170F or F170R;

F171Y, F171A, Y171F, A171F, Y171A, or A171Y;

D172E, D172S, E172D, S172D, E172S, or S172E;

W173E or E173W;

F174M, F174W, M174F, W174F, M174W, or W174M;

L193I or I193L; and/or

T197S or S197T.